

A New Species of *Dioscorea* (Dioscoreaceae) from Japan

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Dioscorea tabatae Hatus., nom. nud., (Dioscoreaceae) from Amami-Oshima, is validated with a Latin diagnosis.

Key words: Amami-Oshima, Dioscoreaceae, *Dioscorea japonica*, *Dioscorea pseudojaponica*, *Dioscorea tabatae*, Japan, Kagoshima, Yuwan-dake

Dioscorea tabatae Hatus. (Dioscoreaceae) was reported as a new species from the higher elevations of Amami-Oshima without description and citation of specimens (Hatusima 1986). Although the species has not been formally published, it is treated as an endangered species in Japan (Environment Agency of Japan 2000, Anonymous 2003).

While examining specimens of *Dioscorea* L. preserved in KAG, we found two specimens identified as *D. tabatae* by Hatusima, *Mitsutake Tabata s.n.* (27 July 1986) (Fig. 1) and *M. Tabata s.n.* (30 October 1977) (Fig. 2). Both specimens were collected from near the top of Mt. Yuwan-dake, Amami-Oshima. The former (Fig. 1) clearly shows dimorphism of the leaves. The smaller leaves are triangular-ovate, truncate or rounded at the base, and 7-veined; the larger leaves are broadly ovate with rounded basal lobes protruding downward, broadly cordate at the base, truncate near the petiole, and 9–13-veined. *M. Tabata s.n.* (30 October 1977) (Fig. 2) has only large leaves, but they are broadly ovate and identical to the large leaves of *M. Tabata s.n.* (27 July 1986).

Although both specimens lack reproductive organs, we consider them to represent an undescribed species, based on the unique characteristic of dimorphic leaves. We therefore validate *Dioscorea tabatae* with a Latin diagnosis and designation of a type specimen in this paper.

Dioscorea tabatae is similar to *D. japonica* Thunb., but *D. japonica* has monomorphic leaves (narrowly) lanceolate to triangular-ovate, cordate or broadly cordate at the base, and 7- or 9-veined. *Dioscorea tabatae* is also similar to *D. pseudojaponica* Hayata from Taiwan, but the leaves of *D. pseudojaponica* are lanceolate to triangular-ovate. Compared to *D. tabatae* the leaves of *D. pseudojaponica* are much narrower.

Dioscorea pseudojaponica has been reported from the Ryukyus (Hatusima & Amano 1958, Hatusima 1961), but the leaves of those plants are more or less cordate at the base regardless of size. The leaves of *D. pseudojaponica* are truncate or rounded at the base, especially when small. We therefore regard the plants from the Ryukyus to be *D. japonica*, with *D. pseudojaponica* being restrict-



FIG. 1. Holotype of *Dioscorea tabatae* Hatus. ex Yamashita & M. N. Tamura (*M. Tabata* s.n. [27 Jul. 1986], KAG).

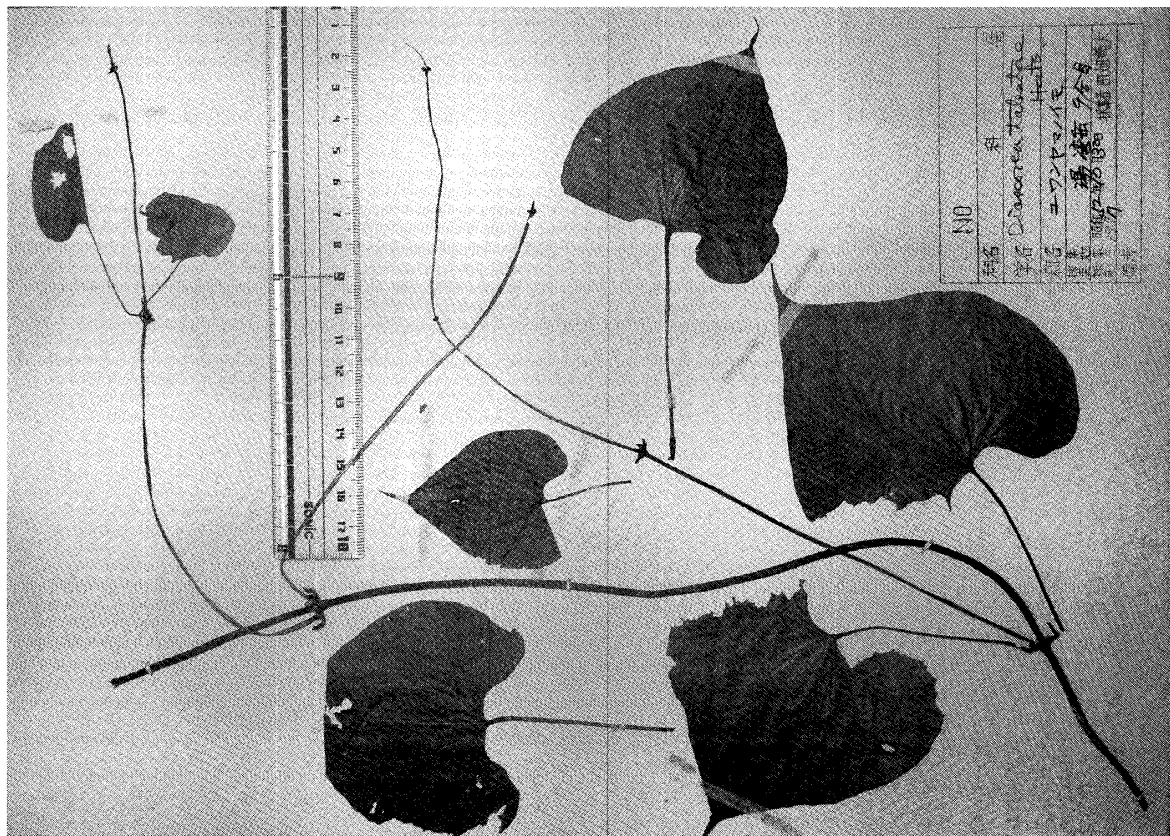


FIG. 2. Paratype of *Dioscorea tabatae* Hatus. ex Yamashita & M. N. Tamura (*M. Tabata* s.n. [30 Oct. 1977], KAG).

ed to Taiwan (Yamashita & Tamura 2008).

Besides Amami-Oshima, *Dioscorea tabatae* also has been reported from Tokunoshima (Anonymous 2003). Although we examined additional specimens at KURA, KYO and TI, in addition to KAG, we did not encounter specimens from Tokunoshima that can be assigned to *D. tabatae* and therefore consider it to be restricted to Amami-Oshima.

Dioscorea tabatae Hatus. ex Yamashita & M. N. Tamura, **sp. nov.** (Figs. 1, 2)

Dioscorea tabatae Hatus., Fl. Kagoshima Pref., rev. ed.: 224 (1986), nom. nud.; M. Hotta in Bull. Kagoshima Pref. College 55: 19, 92 (2004), nom. nud.

Affinis *Dioscoreae japonicae* atque *D. pseudojaponicae*, sed a priori foliis minoribus a basi truncatis vel rotundatis, foliis majoribus late ovatis, nervis foliorum majorum pluribus 9–13, a posteriori foliis majoribus late ovatis, multo latioribus diversa.

Typus. JAPAN, Kagoshima Pref.: Amami-Oshima, at the summit of Mt. Yuwan-dake, 27 Jul. 1986, *Mitsutake Tabata s.n.* (holo- KAG).

Scandent herbs. *Stem* twining to right, glabrous. *Leaves* opposite, simple, glabrous; petiole 2–6.5 cm long; leaf blade 4–11 cm long, 2–9.5 cm broad, adaxially dark green, margin entire, veins palmate, veinlets reticulate, smaller leaf blades triangular-ovate, base truncate or rounded, apex attenuate, veins 7, larger leaf blades broadly ovate, basally lobed, lobes rounded and protruding downward, base broadly cordate, truncate near petiole, apex caudate, veins 9–13. *Reproductive organs* unknown.

Japanese name. Yuwan-onidokoro (Hatusima 1986).

Distribution. Japan: Kagoshima Pref., Amami-Oshima, higher elevations of Mt. Yuwan-dake.

Additional specimen examined. JAPAN, Kagoshima Pref.: Amami-Oshima, at ninth station of Mt. Yuwan-dake, 30 Oct. 1977, *M. Tabata s.n.* (KAG).

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